

Claims

1.- System for the supervision of an exterior environment of a motor vehicle, in particular, installable in an exterior rear view mirror, being said system
5 adapted for detecting the presence of objects susceptible to collide with said vehicle, within a determined supervisory area, covering at least one dead angle, and the system being of the type comprising a capturing device (1) suitable to acquire images or information samples regarding presence captured from the exterior, representative of an object included in said supervisory area, and one
10 electronic system (4) which comprises at least a system for processing and analyzing first input signals obtained through said capturing device (1), and which generates exit signals as a function of the result of said analysis, characterized in that it further comprises at least means for detecting trajectories (2), associated and in cooperation with said electronic system (4) to vary said
15 supervisory area to be covered by the capturing device (1) as a function of second signals, processed and analyzed, obtained by said means for detecting trajectories (2).

2.- System according to claim 1, wherein it further comprises means for detecting inclinations (3) of said vehicle, associated and in cooperation with said
20 electronic system (4) to vary the supervisory area to be covered by the capturing device (1) as a function of said second signals and of third signals, processed and analyzed, obtained by said means for detecting inclinations (3).

3.- System according to claim 1, wherein said means for detecting trajectories (2) comprise at least one accelerometer.

25 4.- System according to claim 1, wherein said means for detecting trajectories (2) comprise at least means for the acquisition of data from a pulsating system for turn sensing, located in at least one wheel of the vehicle.

30 5.- System according to claim 1, wherein said means for detecting trajectories (2) comprise at least one device for turn detection, located in the steering wheel of the vehicle.

6.- System according to claim 2, wherein said means for detecting trajectories (2) and said means for detecting inclinations (3) comprise at least one two axis accelerometer.

7.- System according to claim 2, wherein said means for detecting trajectories (2) and said means for detecting inclinations (3) comprise at least one gyroscope.

8- System according to claim 1, wherein said capturing device (1) 5 comprise at least a member of a group including a camera, an infra-red rays system, a radar system and an ultrasound system, or a combination of them.

9.- System according to claim 8, wherein said capturing device (1) is a camera.

10 10.- System according to claim 9, wherein said camera is mobile. 11.- System according to claim 9, wherein said camera is part of said means for detecting trajectories (2).

12.- System according to claim 8, wherein said capturing device (1) is a radar system.

13.- System according to claim 12, wherein said radar system comprises 15 at least two antennas with different inclination.

14.- System according to claim 12, wherein said radar system comprises an antenna that covers at least two combined antennas with different inclinations, or fractal antennas.

15 15.- System according to claim 8, wherein said capturing device (1) is an infra-red rays system.

16.- System according to claim 15, wherein said infra-red rays system comprise at least one emitter and at least one receiver.

17.- System according to claim 8, wherein said capturing device (1) is an ultrasound system.

25 18.- System according to claim 17, wherein said ultrasound system comprises at least one emitter and at least one receiver.

19.- Method for the supervision of an exterior environment of a motor vehicle, for detecting the presence of objects susceptible to collide with said vehicle, within a determined supervisory area, covering at least one dead angle, 30 of the type which, through a system which comprises a capturing device (1) suitable to acquire images or information samples regarding presence captured from the exterior, representative of an object included within said supervisory area, and an electronic system (4), comprise the detection of the entry of an

object in said supervisory area, the obtaining of first signals representative of said detection, the treatment, processing and analysis of said first signals and the generation of exit signals as a result of said analysis, characterized in that it further comprises performing, by means of said electronic system (4) and by at 5 least means for detecting trajectories (2), the detection of possible variations in the trajectory of the vehicle and the treatment, processing and analysis of second signals representative of said possible variations in the trajectory, to vary the supervisory area to be covered by the capturing device (1).

20.- Method according to claim 19, wherein it further comprises 10 performing, by means of said electronic system (4) and by at least means for detecting inclinations (3) of the vehicle, the detection of possible variations in the inclination of the vehicle and the treatment, processing and analysis of third signals representative of said possible variations in the inclination of the vehicle, to vary the supervisory area to be covered by the capturing device (1), as a 15 function of said second and third signals, treated and processed.

21.- Method according to claim 20, wherein for each of the possible trajectories and/or each of the possible inclination positions adopted by the vehicle, after said treatment, processing and analysis of said signals representative of the possible variations in the trajectory and/or inclination of the 20 vehicle, it comprises the storage, by means of the electronic system (4), of representative values, forming the whole of said representative values a chart that relates the trajectory and/or inclination with a corresponding supervisory area to be covered by the capturing device (1), being said chart accessible for the electronic system (4) and used by it to vary the supervisory area to be 25 covered by the capturing device (1).

22.- Method according to claim 21, wherein it comprises using as capturing device (1) at least one member of a group including a camera, an infrared rays system, a radar system and an ultrasound system, or a combination of them.

30 23.- Method according to claim 22, wherein it comprises using a camera is used as capturing device (1), and varying the supervisory area of the capturing device (1), by means of the electronic system (4), varying vertical and horizontal coordinates of a series of points, which as a whole will delimit said area.

24.- Method according to claim 22, wherein it comprises using a mobile camera as capturing device (1), and varying the supervisory area of the capturing device (1), by means of the electronic system (4), by varying vertical and horizontal coordinates of a series of points, which as a whole will delimit said 5 area and/or by moving said mobile camera.

25.- Method according to claim 23 or 24, wherein it comprises using, by means of the electronic system (4), at least part of the information acquired by said camera for detecting changes in the trajectory of the vehicle.

26.- Method according to claim 22, wherein it comprises using a radar 10 system as capturing device (1), with at least two antennas with different inclination or a radar system with one antenna which comprises at least two antennas with different inclination, or fractal antennas, and varying the supervisory area of the capturing device (1), by means of the electronic system (4), choosing the antenna through which to emit and/or varying its emission 15 power.

27.- Method according to claim 22, wherein it comprises using an infra-red rays system with at least one emitter and at least one receiver as capturing device (1), and varying the supervisory area of the capturing device (1), by means of the electronic system (4), choosing the emitter through which to emit 20 and/or varying its emission power.

28.- Method according to claim 22, wherein it comprises using an ultrasound system with at least one emitter and at least one receiver as capturing device (1), and varying the supervisory area of the capturing device (1), by means of the electronic system (4), choosing the emitter through which to emit 25 and/or varying its emission power.